

REMARKS

Claims 1-26 are pending in this application, with claims 1, 8, 15, 18, 21, and 24 being independent. Favorable reconsideration is respectfully requested in view of the following comments of the Applicants, which are preceded by related comments of the Examiner in small bold type:

Double Patenting

Claims 1,3-5, 7-8, 10-12, 14-15, 17-18, 20-21, 23-24 and 26 are provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-2, 4-5, 7-9, 11-12, 14-15, 16, 18-19, 21-22, and 24-25, of copending Application No. 10/749,792, respectively, in view of Salett et al (US 6,490,276). Although the conflicting claims are not identical, they are not patentably distinct from each other because the claims recite substantially same limitations, except delivering the packet to an exception processor being shared by the packet forwarding device in the stack. Salett discloses a method for forwarding a data frame from a first switch to a second switch, thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to apply Salett's method of forwarding data frames to the instance application in order to transmit data effectively.

Applicants will consider filing a terminal disclaimer upon an indication of allowable subject matter.

Claim Rejections - 35 USC 103

Claims 1-4, 7-11, 14-17 and 18-26 are rejected under 35 U.S.C. 103(a) as being anticipated by Salett et al (US 6,490,276), hereinafter Salett, in view of Kalkunte et al (US 7,139,269).

Independent claim 1 is directed to a method that includes receiving a packet at a first device in a stack of packet forwarding devices that are configured to direct the packet to a destination external to the stack. The method also includes identifying an exception associated with the packet, and inserting a vector in the packet for delivering the packet to an exception processor being shared by the packet forwarding devices in the stack.

None of Hebb, Salett, or Kalkunte, alone or in combination, describe or would have made obvious the features of independent claim 1.

Hebb describes forwarding packets by using packet processing logic that includes forwarding engines, which are external to a source and a destination (between which the packets are transferred) (Abstract and col. 2, lines 21-53). However, as conceded by the Examiner in the current action, Hebb does not describe and would not make obvious inserting a vector into a packet for delivering the packet to an exception processor that is being shared by packet forwarding devices in a stack, as recited in independent claim 1.

Salett is not understood to cure Hebb's deficiencies. Salett describes a system that delivers packets from a source to a destination without use of forwarding devices (located between the source and destination). While Salett describes updating a packet header for delivery, the updated header is used to identify the source and the destination of the packet, but is not used to deliver a packet having an identified exception to an exception processor. As Salett explains:

A method and apparatus for providing data communication between stations on a network which optimizes the amount of resources required for a network switch. (Salett, Abstract.)

The operation of the present invention is illustrated by an example where station A 215 sends information to station B 223, as shown in FIG. 2. The network initially does not know which stations are associated with which ports or switches, and preferably must learn the associations as data frames are sent through the network, as described below. When station A 215 first transmits a data frame, it is received by switch 205 on port 4. The CAM 213 in switch 205 updates a station list contained in the CAM 213 to indicate that station A 215 is on port 4. For preferably only on the stack bus, the switch 205 then updates the header information of the data frame to indicate that it originated from switch 205. In one embodiment of the present invention, the SRC_PORT or local port bits of the packet bus and stack header of the data frame are encoded with the originating switch. Switch 205 also reads the destination station from the header information of the data frame, which in the present example is station B 223. Switch 205 compares the destination station of the data frame with its station list. If the data frame is the first data frame transmitted through the switch 205 which has station B 223 as a destination station, station B 223 will not be found in the station list of switch 205. Switch 205 then sends or "floods" the data frame out all ports on switch 205 and to all other switches on the network. Flooding is typically implemented by asserting all bits in the CAM cycle, including stack box bits, except for the source port bit. (Id., col. 4, lines 33-59.)

In addition, Salett appears silent regarding packet forwarding devices configured to direct a packet to a destination external to a stack, as recited in independent claim 1. Further, the reference appears silent in regards to identifying an exception associated with a packet, and inserting a vector in the packet for delivering the packet to an exception processor being shared by packet forwarding devices in the stack, also recited by claim 1.

Kalkunte is not understood to cure the deficiencies of Hebb and Salett. For example, Kalkunte does not describe and would not have made obvious inserting a vector in a packet for delivering the packet to an exception processor being shared by packet forwarding devices in a stack, as recited by claim 1. Rather, Kalkunte is understood to describe allowing multiple ports to be connected to a source port (from which packets are sent) to prevent congestion (referred to as head of line blocking). As Kalkunte explains:

In the example illustrated in FIG. 41, ports 1-6 are sending packets to port 8. At some point in time if there is substantial traffic from ports 1-6 then port 8 will get congested. In switches that do not implement a mechanism to prevent Head of Line blocking, the congestion on one port can affect the traffic going to other port. In FIG. 41, even though port 8 is congested, port 1 and 7 should be able to communicate with each other without any problem. The present invention supports a mechanism to prevent Head Of Line Blocking based on number of packets per egress port per COS basis and number of cells on per egress port.

This mechanism considers the number of packets in each of the COS queues for a given port. Each port is allowed to have a maximum of 1024 packets from all the COS queues, waiting in the outgoing queue. This maximum is divided between the number of COS queues supported by a given port and is referred to as Maximum Transaction Queue Size. (col. 30, lines 13-29.)

Accordingly, although port 8 of Kalkunte communicates with ports 1-6, port 8 is not an *exception processor* that is shared by packet forwarding devices and to which a packet with an identified exception is delivered.

There would have been no motivation to combine Kalkunte with Hebb and Salett. Even if the references were combined, the resulting combination would not disclose or suggest inserting a vector in a packet for delivering the packet to an exception processor being shared by packet forwarding devices in a stack, as recited by claim 1.

Independent claims 8, 15, 18, 21 and 24 each contain subject matter similar to amended independent claim 1. These claims are also believed to be patentable over Hebb, Salett, and Kalkunte, individually or in combination for at least the reasons noted above.

Dependent claims 2-4, 9-11, 14, 16-17, 19-20, 22-23, and 25-26 are also patentable over Hebb, Salett, and Kalkunte, for at least the reasons set forth in its corresponding independent claim and, as such, has not been addressed specifically herein.

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Claims 5-6 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hebb-Salett-Kalkunte as respectively applied to claims 1 and 8 above, in view of Alabli et al (US 5,721,820), hereinafter Alabli.

As explained above, claims 5-6 and 12-13 are patentable over Hebb, Salett, and Kalkunte. Alabli does not remedy the deficiencies of Hebb, Salett, and Kalkunte, at least because Alabli did not describe and would not have made obvious inserting a vector in a packet for delivering the packet to an exception processor being shared by packet forwarding devices in a stack, as recited by claims 1 and 8, from which claims 5-6 and 12-13 depend, respectively.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

In view of the foregoing amendments and remarks, Applicants respectfully submit that the application is in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney can be reached at the address shown below. All telephone calls should be directed to the undersigned at 617-368-2191.

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No fees are believed due at this time. Please apply any charges or credits to deposit account 06-1050, referencing Attorney Docket No. 10559-906001.

Respectfully submitted,

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